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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BANANKHAH, MAJID A

ART UNIT PAPER NUMBER

2195

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/040,606

Applicant(s)

WYATT, DAVID A.

Examiner

Majid A Banankhah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application filed on December 28, 2001. Claims 1-32 are presented for examination.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-16 are rejected under 35 U.S.C. 101 because he claimed invention is directed to non-statutory subject matter.

As per claim 1, the claimed “storing list”, and “creating a tree of relationship” is non-statutory as not being tangibly embodied in a manner as to be executable. The “storing a list of resources” (whether physical or virtual), and/or “creating a tree of relationships for the parent and child objects” are contained entirely within software. Claims 2-13 are rejected for at least the same reasons as discussed for their parent claim, as they fail to present any limitations that resolve the deficiencies of the claim from which they depend.

As per claim 14, “maintaining a record of available resources”, and “updating record of available resources” is non-statutory as not being tangibly embodied in a manner as to be executable. Claims 15-16 is rejected for at least the same reasons as discussed for their parent claim, as they fail to present any limitations that resolve the deficiencies of the claim from which they depend.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, the claim recite “physical resource objects”, and “virtual resource objects”, however, the claims recite the limitation "the physical and virtual resource" in line 5-6. There is insufficient antecedent basis for this limitation in the claim.

Additionally, the last step of “creating a tree structure for the parent and child objects and physical and virtual resources” is confusing. It is unclear “the tree relationship” is between what elements. The relationship in the “tree relationship” between “parent and child objects” and “physical and virtual resources” in the claim is unclear. Claims 2-13 are rejected for at least the same reasons as discussed for their parent claim.

In claim 14, the statement “tracking relationship among producers and consumers” is confusing. The word “producer”, and “consumers” is singled out and does not have any relationship with other elements of the claim. Claims 15-16 are rejected for the rejection of their parent claim.

Claims 17-29 are rejected for similar reasons as explained in the rejection of claims 1-13, and claims 30-32 are rejected for similar reason as explained in the rejection of claims 14-16.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

While claims are rejected under **35 USC 101, non-statutory subject matter** as stated above, in order to advance prosecution, claims will be treated on the merits in view of Examiner's best understanding of the specification and the prior art.

4. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sankaranarayan et al. (US Pat. No. 6,799,208, hereafter Sankaran).

As to claims 1, 14, Sankaran teaches the invention as claimed including, method, comprising: storing a list of physical resource objects (col. 8, lines 1-9); storing a list of virtual resource objects (col., lines 10-17); storing a list of parent and child objects (Fig. 2, 32 (1), ...32(A), and 104(1) ...104(p)); and creating a tree of relationships for the parent and child objects and the physical and virtual resources (Fig. 17, 1700).

Sankaran, even though teaches of relating the tree structure of the resource to particular condition based on availability of the resource to notify the resource providers (See Fig. 17, and col. 9, lines 19-49) but does not clearly and explicitly explain the tree relationship for the parent and child objects (producer and consumer), and the physical and virtual resources (available and consumed resources). However, it is obvious for one ordinary skill in that art at the time the

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invention was made to make a data structure relating to who are the producers and consumers of the resources, and what amount of resources are available or in use at any time. For the reason to have a bookkeeping method and be able to utilize the resources efficiently. Therefore it would have been obvious for one ordinary skill in the art at the time the invention was made to related the resource tree structure of Sankaran to the producer and consumer of the resource as well as consumed and available amount of resource for increasing the utilization and eventually the efficiency of the resource management system of Sankaran.

Regarding the updating step of the records in claim 14, Sankaran teaches of the limitation in col. 29, lines 41-49.

As to claim 2, Sankaran teaches the invention as claimed including the method of claim 1, wherein storing a list of virtual resource objects includes storing an object representing system memory bandwidth (col. 4, lines 38-47).

As to claim 3, Sankaran teaches the invention as claimed including wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth (col. 4, line 65 to col. 5, line 7).

As to claim 4, Sankaran teaches the invention as claimed including, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed (col. 4, line 65 to col. 5, line 7).

As to claim 5-8, Sankaran does not explicitly teach of consuming bandwidth that represents "an overlay unit", "cursor unit", "display output unit", and "local graphic memory". However, it is well known in the art at the time the invention was made to use resource as a finite quantity of computing component in the computer system representing hardware such as "an overlay unit", "cursor unit", "display output unit", and "local graphic memory", as suggested by Sankaran in col. 4, lines 38-47.

As to claim 9, Sankaran teaches the invention as claimed including, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth (col. 4, line 65 to col. 5, line 7).

As to claims 10-13, Sankaran does not explicitly teach of consuming bandwidth that represents "an overlay unit", "cursor unit", "display output unit", and "local graphic memory". However, it

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is well known in the art at the time the invention was made to use resource as a finite quantity of computing component in the computer system representing hardware such as "an overlay unit", "cursor unit", "display output unit", and "local graphic memory", as suggested by Sankaran in col. 4, lines 38-47.

As to claim 15-16, please see the rejection of claims 3, and 5-8.

As to claims 17-29, please see the rejection of claims 1-13 respectively.

As to claims 30-32, please see the rejection of claims 14-16 respectively.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Majid A. Banankhah** whose telephone number is (571) 272-3770. The examiner can normally be reached on Monday – Friday, 7:00 AM – 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Meng-Ai An** can be reached on (571) 272-3756.

Any inquiry of a general nature or relating to the status of this application should be directed to the **TC2100 Group** receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Majid Banankhah

4/22/05


MAJID BANANKHAH
PRIMARY EXAMINER